

ABSTRACT

A digital image texture analyzing method including the steps of (a) obtaining the mean (μ_0) and variance (σ_0) of the pixel values of an original image, and (b) obtaining $m \times n$ filtered images by filtering the original image using predetermined filters, each having a unique combination of one of m scales and one of n orientations, where m and n are predetermined positive integers, (c) calculating the means ($\mu_{11}, \mu_{21}, \dots, \mu_{mn}$) and variances ($\sigma_{11}, \sigma_{21}, \dots, \sigma_{mn}$) of the respective filtered images, and (d) obtaining a texture descriptor having the mean (μ_0) and variance (σ_0) of the pixel values of the original image obtained in the step (a), and the means ($\mu_{11}, \mu_{21}, \dots, \mu_{mn}$) and variances ($\sigma_{11}, \sigma_{21}, \dots, \sigma_{mn}$) of the respective filtered images obtained in the step (c), as texture features. The texture analyzing method allows image textures to be more accurately analyzed and compared. Also, according to the digital image texture analyzing method, when an image is only rotated, enlarged or reduced relative to another image, the similarity of the textures of two images are analyzed, that is, accurate analysis can be performed.